

Java Programming Lab Manual

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JAVA PROGRAMMING LAB MANUAL

Editors

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Chapter 20

Object and Classes

Waseem Javaid Soomro, Zeeshan Bhatti, Asadullah Shah

Abstract

Java has been developed as a powerful Object Oriented Language (OOL) and the basic principle of OOL is based on classes and objects. So Java language can be divided into two main parts, Classes and Objects. Everything in Java is within the scope of classes and objects. In this chapter we will understand the basic principle of objects and classes in Java, the relation between them and their characteristics.

20.1 Java Objects

An Object Oriented (OO) program models the application as a world of interacting objects. An object can create other objects. The key points on objects are :

- An object can call another object's (and its own) methods (that is, "send messages").
- An object has *data fields*, which hold values that can change while the program is running.
- In Java objects can model real-world objects, can represent GUI (Graphical User Interface) components.
- Objects can represent software entities (events, files, images, etc.)
- Objects can represent abstract concepts (for example, rules of a game, a particular type of dance, etc.)
- In Java, numbers and characters are not objects but there are so-called wrapper classes Integer, Double, Character, etc., which represent numbers and characters as objects.